

AMENDMENTS TO THE CLAIMS

Please cancel claims 29-50 without prejudice to pursuing these claims in a continuation or other application. Please amend claim 51 as follows:

1-50. (Canceled)

51. (Currently Amended) A system of joined structures, comprising:

a first structure having a first aperture in a composite material, the first aperture having a first interior surface and a first minimum radial extent, the composite material configured so that a small radial force to the first internal surface will damage the composite material;

a second structure having a second aperture in a metallic material, the second aperture having a second interior surface and a second minimum radial extent at least approximately the same as the first minimum radial extent; and

a coupling device having a first shank section extending through the first aperture and a second shank section extending through the second aperture, but not extending into the first aperture, the first shank section of the coupling device having at least one of a hardness, toughness, and density greater than that of the second shank section of the coupling device, wherein:

a portion of the second shank section has a greater radial extent than the first shank section;

the portion of the second shank section applies a first radial force to the second interior surface and the first shank section applies at least approximately no radial force to the first interior surface; and
the composite material proximate to the first aperture is undamaged; and

a sealant ~~rigidly affixed to and~~ extending between the interior surface of the first aperture and the first shank section of the coupling device, the sealant rigidly affixing the first shank section of the coupling device to the interior surface of the first aperture.

52. (Previously Presented) The system of claim 51 wherein the first shank section is not in contact with the first interior surface.

53. (Previously Presented) The system of claim 51 wherein the coupling device includes a rivet.

54. (Previously Presented) The system of claim 51 wherein the coupling device includes a metallic material.

55. (Previously Presented) The system of claim 51 wherein the composite material includes a carbon fiber material and the metallic material includes aluminum.

56. (Previously Presented) The system of claim 51 wherein the first shank section of the coupling device is connected to a head, and wherein the first aperture includes a countersunk portion for receiving the head.

57. (Previously Presented) The system of claim 51 wherein the first shank section of the coupling device is connected to a head, and wherein the head has a radial extent greater than a radial extent of at least a portion of the first aperture.

58. (Previously Presented) The system of claim 51 wherein the second shank section of the coupling device is connected to a tail, the tail extending out of the second

aperture, the tail having a radial extent greater than a radial extent of at least a portion of the second aperture.

59. (Previously Presented) The system of claim 51 wherein:

the first shank section of the coupling device is connected to a head, the head having a radial extent greater than a radial extent of at least a portion of the first aperture; and wherein

the second shank section of the coupling device is connected to a tail, the tail extending out of the second aperture, the tail having a greater radial extent than a radial extent of at least a portion of the second aperture.

60. (Previously Presented) The system of claim 51 wherein:

the first shank section of the coupling device is connected to a head, the head having a radial extent greater than a radial extent of at least a portion of the first aperture; and wherein

the second shank section of the coupling device is connected to a tail, the tail extending out of the second aperture, the tail having a greater radial extent than a radial extent of at least a portion of the second aperture; and wherein the first and second structures are clamped together by the head and the tail.

61. (Previously Presented) The system of claim 51, further comprising a vehicle, and wherein the coupling device, the first structure, and the second structure are installed in the vehicle.